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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,572	04/07/2005	Volker Reiffenrath	MERCK-2991	8987
23599 7590 01/19/2007 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			EXAMINER CHO, JENNIFER Y	
			ART UNIT	PAPER NUMBER
			1621	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/19/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,572	<b>Applicant(s)</b> REIFFENRATH ET AL.	
	<b>Examiner</b> Jennifer Y. Cho	<b>Art Unit</b> 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                 |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/7/2005</u> | 6) <input type="checkbox"/> Other: _____                                                |

### **Detailed Action**

This Office Action is in response to Applicant's communication filed on 12/5/2006. Claims 1-12 are pending in this application.

Applicant's election with traverse of Group 1, claims 1-7 and 9 in the reply filed on 12/5/2006 is acknowledged. The traversal is on the ground(s) that the Office Action has not established that it would pose an undue burden to examine the full scope of the claims. This is not found persuasive because the claims of the various groups are divergent in subject matter and are classified separately. The requirement is still deemed proper and is therefore made FINAL.

Claims 8 and 10-12 are withdrawn from consideration, being drawn to the non-elected subject matter.

### **Objections**

### **Content of Specification**

- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

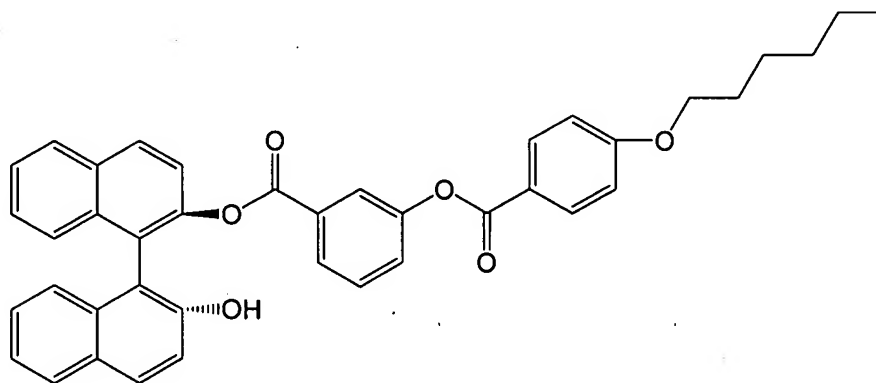
Content of specification is missing cross-references to related applications. Appropriate correction is required.

### **Claim Rejections – 35 USC 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2 and 9 are rejected under 35 U.S.C. 112, first paragraph, because of a scope of enablement issue. A reading of the applicant's specification indicates that the term "chiral phenols" is too broad. For example, the specification does not enable the following chiral phenol as taught in Heppke et al. (US Patent 4,826,620). See column 3, lines 50-58, example 2.

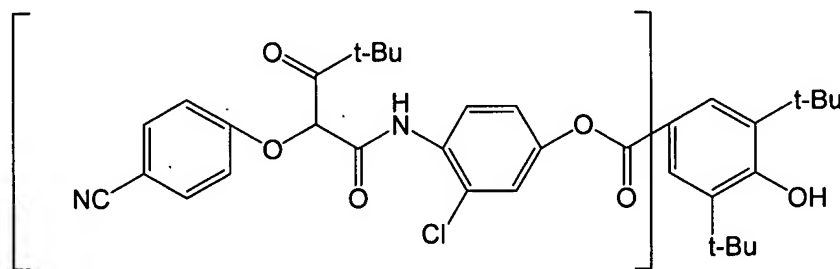


Thus the term "chiral phenol" should be limited to compounds of the formula 1 (see specification's page 5, lines 24-35), in which the chiral radical is described on page 9, lines 10-35. These limitations are in claims 3 and 6. The Examiner suggests that these limitations be inserted into claim 1. Thus, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

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the invention commensurate in scope with the absence of these limitations. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claims 3, 4, 5 and 7 are rejected under 35 U.S.C. 112, first paragraph, because of a scope of enablement issue. A reading of the applicant's specification indicates that the R<sup>\*1</sup> chiral radical as described in the claims is too broad. For example, the specification does not enable the following R<sup>\*1</sup> chiral radical as taught in Buckland et al. (US Patent 4,758,501). See column 6, table 1, coupler A5, lines 60-70.

$$R^{*1} =$$


Thus, R<sup>\*1</sup> chiral radical should be limited to the limitations of claim 6 (see specification's page 9, line 10-35). The Examiner suggests that these limitations be inserted in the claims. Thus, the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with the absence of these limitations. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, because of a lack of antecedent basis. Claims 4, 5 and 6 recite the limitation for the chiral radical  $R^{*1}$  in reference to claim 1. Claim 1 does not define  $R^{*1}$ . There is insufficient antecedent basis for this limitation in the claims. Applicant is advised to correct the claim language.

### **Claim Rejections – 35 USC 102**

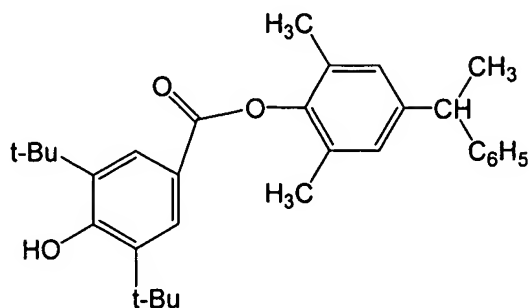
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 9 are rejected under 35 U.S.C. 102b as being anticipated by Schoenfeld et al. (US 6,153,722). Schoenfeld et al. teaches cholesteric liquid-crystalline polymers, composed of phenols with chiral bifunctional comonomers, which include a stabilizer and act as free-radical scavengers (see column 2, lines 3-11, lines 14-21 and lines 30-54). Therefore these claims are fully met.

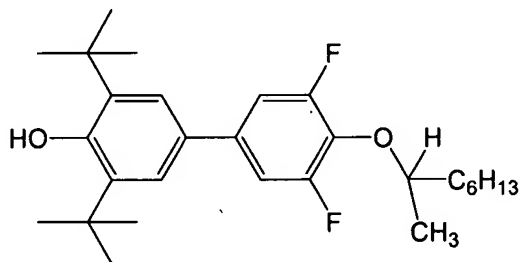
Claim 4 is rejected under 35 U.S.C. 102b as being anticipated by Lind (US 4,038,250). Lind teaches the following chiral phenol (see table 1, column 7, No F.)



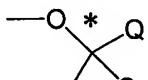
Therefore this claim is fully met.

### Allowable Subject Matter

Applicant's elected species, drawn below, appears to be free of prior art.



The Examiner recommends the applicant limit their claims to the scope of claim 7,

compounds of the formulae Ia-2, whereby R<sup>\*1</sup> chiral radical is , in which Q, n and m are described in claim 6.

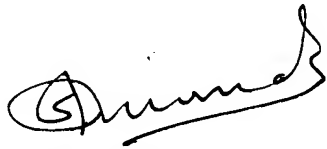
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Y. Cho whose telephone number is (571) 272 6246. The examiner can normally be reached on 9 AM - 6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272 0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer Cho *JC*  
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Art Unit: 1621

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